Communications & Electronics Division

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July-August 1952

Vacation Issue

The

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"ELECTRONICS" EDITORIAL SHOWS MOTOROLA MICROWAVE LEADER

A recent "Electronics" Magazine article showed over three times more Motorola Microwave systems in operation than all other makes combined.

After making a survey of the pipeline microwave field, the editors of "Electronics" Magazine published their findings in the "Industry Report" section of the August, 1952 issue. The existing market, the potential market, the amount of microwave construction, and the existing systems were all scanned. One of the first conclusions drawn in the editorial was that the potential market has just been scratched. Comparative cost of a microwave system and a private line telephone system was made. The initial cost they found to be roughly equal but the maintenance cost of microwave much lower than that of a similar telephone system.

When the microwave "pie" was cut up by "Electronics", it was found that Motorola not only is one of the leaders in total systems in and under construction, but also has installed more than 70% of the total operating systems. The article went on to point out that two systems, Mid-Valley and Texas Illinois, both Motorola systems, each over 1,000 miles long, are in daily operation.

DUAL-PURPOSE ANTENNA

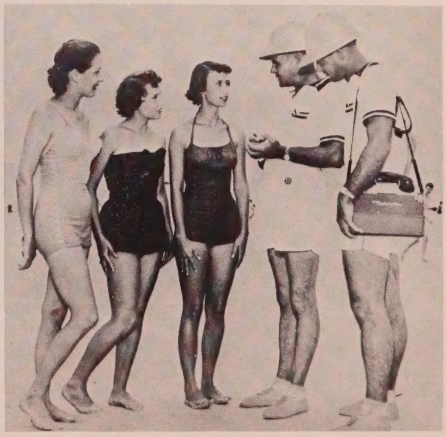
During the summer, D. E. Noble, Motorola Vice President, presented Ray Klemetti, Chief Radio Engineer of the Michigan State Conservation Department, with a dual purpose antenna and fishing rod. The device is made of shatterproof flexible glass with an internal braid conductor. It is fitted with line guides and is wound with colored fishing rod silk.

CHECKING THE "PRO'S"

The natty reporter right is shown relaying information on the progress of a golf match to clubhouse bound fans. Chalk up another novel application for the "Handie-Talkie" unit.

SHORT ORDER COPS

Clearwater, Fla., policemen use the "Handie-Talkie" unit on beach patrol duty. Clad in uniforms more informal than most, two patrolmen are shown answering the questions of three girls from Atlanta.



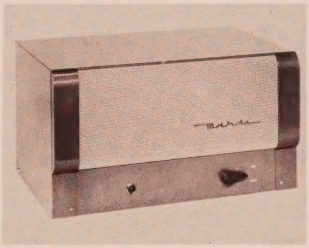
APCO conventioneers viewing new Motorola Radio Call Box are: (Left to Right) Lester Spillane, FCC, Dan Arnold, FCC, Elmer E. Robinson, Mayor of San Francisco, Eugene S. Goebel, Motorola Executive and Admiral A. G. Cook, California Director of Civil Defense.

NEW RADIO DEVELOPMENTS UNVEILED AT APCO CONVENTION

From August 19th through 22nd over one-hundred police communications officers from all parts of the United States gathered at the Whitcomb Hotel in San Francisco for their annual review of innovations in the communication world. Associated Police Communications Officers, Inc. is dedicated to better protection of the public welfare through greater effectiveness in communications. Always progressive in their ideas of better coordination through better communications, they hold a national conclave each year to trade ideas and to look over new products which could be helpful to them.

Daniel E. Noble, vice president in charge of the Communications and Electronics Division of Motorola, Inc., addressed the convention on the role communications has played in increasing the effective life of a man. His paper was entiled, "Electronics, The Time Expander." By fast communication we save time which can be profitably put to use. Therefore, today we can accomplish much more in the same life period than our ancestors. Life is speeded up, he pointed out, because we can share ideas more readily and a greater store of critical knowledge can be gathered and put to use.

Mr. Noble then went on to demonstrate an experimental transmitter which uses transistors. After placing a Motorola "Handie-Talkie" Pack Set in front of the microphone, he went into the audience with his "Transistor-mitter". From the audience he spoke into the pint sized transmitter which sent his words to the Pack Set and into the microphone for the audience to hear.



Home Unit Monitor Receiver

The device is somewhat smaller than four packs of cigarettes placed two in a stack, end to end. Its weight including hearing aid batteries, is less than a pound and with four transistors and two subminiature tubes, it puts out about 80 milli-watts at 90 volts. Having an effective range of one-half mile, it was operated in the 25-50 mc. band.

A sensation was caused by Mr. John Byrne, Director of Engineering for Motorola's Communications and Electronics Division, when he unveiled the new Motorola Radio Call Box which is now fully engineered and ready for production. An answer to the series of articles appearing recently in Colliers Magazine, "Terror in Our Streets", the call box, featuring the "Handie-Talkie" Radiophone, will effectively assist the foot patrolman in covering a wider area without having to return to the call box to be in communication with headquarters. A more complete description of the Radio Call Box will be found on page six of this issue.

Mr. Byrne, in his presentation "Engineering Advances in Public Safety Radio", also introduced the new Motorola Monitor Receiver for use in public safety, civilian defense, industrial and commercial radio systems. Designed for mass production, the Monitor or Alert Receiver is available for operation in the 25-50 mc. and 152-174 mc. ranges. Optional selective signaling, emergency 6 VDC power supply, and red-yellow-blue-white light alert cabinet attachments are available.

Along with a model of the Radio Call Box and the Monitor Receiver, Mr. Byrne also showed the convention the new Motorola 450-470 MC. two-way radio mobile equipment. The new receiver design features include sealed, silver plated cavities for optimum R.F. pre-selection characteristics. The line includes mobile units for 6 or 12 volt D.C. operation. Associated base station models are available with local or remote control facilities.

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THE POLITICAL CO

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Just about everyone actively concerned with either the Republican or Democratic National Conventions used a Motorola "Handie-Talkie" Radiophone at one time or another during the conventions.

The four major wire services, INP, INS, UP, and AP all depended on "Handie-Talkie" to get complete coverage by coordinating the limited numbers of photographers and reporters allowed into the conventions.

The Chicago Fire and Police Departments and the Interstate Protective Agency were able to use

① John J. Reidy, INS Mobile Radio Coordinator issues instructions from his position in the press section next to the speakers rostrum at the Republican National Convention.

② Senator Estes Kefauver, with his father and James Roosevelt, makes an unexpected appearance at the Democratic National Convention.

③ Jean Broo, Illinois Bell Telephone "Hello-Girl" uses a Motorola "Handie-Talkie" Radiophone to relay a message to the convention floor.

④ From his position in the convention amphitheatre balcony, Maurice Johnson, INP cameraman, operated the 48 inch "Big Bertha."

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LA COVERS CONVENTIONS

the minimum number of men at the conventions because their work could be coordinated. As one police captain expressed it, "In an emergency one man equipped with "Handie-Talkie" is the equivalent of three men and we have control of the situation."

Broadcast networks for both AM and TV broadcast work, TV Theater News-Reel camera crews, the Speech Queing Service, Teleprompter, Inc. all found constant contact by Motorola "Handie-Talkie" Radiophone indispensable for coordinating their work on the crowded, noisy convention floor.

⑤ Senator Homer Ferguson, of Michigan, uses a "Handie-Talkie" to give a detailed story on voting procedures to the press section.

⑥ INS political reporter E. J. Cadau, right, interviews GOP Convention Chairman, Guy G. Gabrielson during seating fight.

⑦ Philip G. Reed, Managing Editor INS, and John Reidy of Hearst Newspapers receive an on-the-spot news interview over a Motorola Uni-Channel Sensicon Dispatcher.

⑧ William Randolph Hearst, Jr. in action as a working reporter at the Republican Convention.

⑨ William Straeter, AP photographer, talks with a "Tipster" who is strategically located near a caucusing delegation.

ABOVE: A police officer uses the "Handie-Talkie" unit installed in the call box.

BELOW: A patrolman carries the "Handie-Talkie" unit after removing it from the call box.

motorola introduces . . .

THE RADIO CALL BOX

VERSATILE NEW PRODUCT A HYBRID OF QUIK-CALL AND HANDIE-TALKIE UNIT

Two of Motorola's established products, the QUIK-CALL selective signaling system and the "Handie-Talkie" radiophone, have been combined to form a unique and versatile Radio Call Box.

The Radio Call Box is designed to provide 2-way communications between a central office and selected fixed and mobile outposts. Operating completely without wireline interconnections, the new device will provide voice communications for Public Safety, Civil Defense, Industrial and Commercial operations.

A "Handie-Talkie" FM Portable Radiophone with QUIK-CALL facilities is installed in the call box; the associated base station selective signaling equipment and transmitter-receiver unit are installed at a central office thus comprising a complete 2-way system.

OPERATION

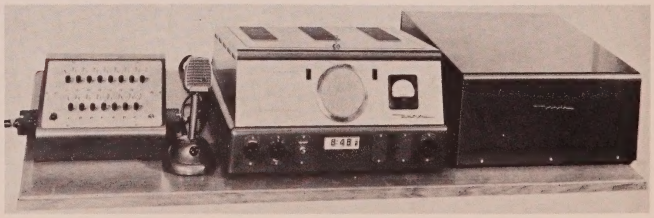
When the central station operator wishes to communicate with a patrolman or guard in the vicinity of a particular radio call box, he selects that box by transmitting the associated selective signal. Upon reception of the signal, a red light on top of the call box pole lights to attract the patrolman's attention. The patrolman responds by unlocking the call box and signaling the central station.

A coded call may also be initiated by the patrolman from the call box by depressing the signal button. Reception of the signal causes a lamp on a central station console to light. One lamp is associated with each call box in the system.

When, in an emergency, it becomes desirable for the patrolman to work away from the call box and yet remain in constant communication with the central station, the portable "Handie-Talkie" unit may be quickly removed from the box and carried about, ready to operate at any time.

BATTERIES CONSERVED

The "Handie-Talkie" unit is supplied by a 117 volt, 60 cycle AC line while installed in the call box. As the unit is removed from the box, it is automatically switched to its self-contained battery power supply. In this manner the batteries are conserved until they are needed.



A typical base station installation incorporates the Dispatcher Consolette, the Uni-Channel Sensicon Transmitter-Receiver and the Selective Signaling Chassis shown above.

REGIONAL DIRECTORY

For your convenience there is listed below a complete directory of Motorola Regional Managers, their offices and territory covered.

REGION 1
HENRY C. GAMMELL
Arizona, California, Idaho, Montana, Nevada, Oregon, Washington, Wyoming, Utah.
Office: 800 South "B" Street
San Mateo, California
Phone: DIAMOND 4-6386

REGION 2
EUGENE F. BROWN
Colorado, Iowa, Kansas, Minnesota, Nebraska, North Dakota, South Dakota.
Office: 817 Kilpatrick Bldg.
Omaha, Nebraska
Phone: WEBSTER 0017

REGION 3
HOMER L. MARRS
Illinois, Indiana, Missouri, Wisconsin.
Office: 1327 W. Washington Blvd.
Chicago, Illinois
Phone: TAYLOR 9-2200

REGION 4
GLENN MUNRO
Kentucky, Michigan, Ohio, Tennessee.
Office: 19142 James Couzens Hwy.
Detroit 35, Michigan
Phone: UNIVERSITY 3-6464

REGION 5
EDWARD L. FALLS, JR.
Arkansas, Louisiana, New Mexico, Oklahoma, Texas.
Office: 6310 Denton Drive
Dallas 19, Texas
Phone: ELMHURST 5311

REGION 6
HORACE E. BOYLAN
Alabama, Florida, Georgia, Mississippi, South Carolina.
Office: Stallings Bldg., Rm. 601
1829 First Ave., North
Birmingham, Alabama
Phone: 4-4582

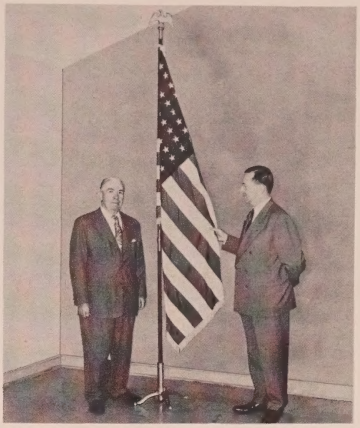
REGION 7
L. HARRISS ROBINSON
Delaware, Maryland, North Carolina, Virginia, Washington, D.C., West Virginia.
Office: 2309 Calvert St., N.W.
Washington 8, D. C.
Phone: ADAMS 5620

REGION 8
P. R. KENDALL
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.
Office: 540 Main Street
Winchester, Mass.
Phone: 6-2482

REGION 9
LOWELL E. WHITE
New Jersey, New York, Pennsylvania.
Office: 102 Linwood Plaza
Fort Lee, New Jersey
Phone: 8-9100

FLAG PRESENTATION

Mr. Paul V. Galvin, president and founder of Motorola Inc., was the recipient recently of a flag donated to Motorola by the regional sales managers of the Communications and Electronics Division for display in the newly acquired Communications and Electronics Building. Gene Goebel is shown presenting the flag to Mr. Galvin. The flag is to be placed in the conference room of the new C & E Building.



POWER LINE CARRIER-CONTROL SYMPOSIUMS

This fall, Motorola will accelerate its program of sponsoring technical discussion meetings with the Power Utility Industry. Discussion leaders will cover the broad scope of contemporary power utility radio communications including microwave, power line carrier, supervisory control, protective relaying and telemetering.

Engineering specialists and executives from Motorola will convene in key cities with invited guests from industry in order to provide technical details to all operating personnel interested in the latest developments in power utility communications and electronic control techniques. As in the past, technical papers will be presented covering the design and application of new devices. Invitations will be extended to power utility engineering and management representatives.

A CUSTOMER SERVICE

Kasimir "Kash" Kulesha, Motorola radio communications engineer from New York City, was assigned as consulting engineer to all Motorola 2-way radio users at the recent political conventions. Serving in this capacity Kash kept all systems operating smoothly night and day during the hectic program.

Frequencies, batteries, operational procedures, pack sets, Handie-Talkie Units, A.C. Uni-Channels were all coordinated by Kash to the full satisfaction of all operators, with the able assistance of Ed Kemper and Joe Bolsamello, Motorola Quality Control Engineers.

Kash, (right) is shown in the International News Photo workroom with Ed Stein, INP photo editor, operating a Motorola A.C. Uni-Channel base station.

"*If we were in the market for a new 2-way radio system,*

we'd want to buy Motorola again . . . a preference we feel is entirely justified by the excellent performance and minimum service requirements of the equipment, and the constantly alert cooperation of local Motorola engineers."

The above statement is typical of those received by Motorola several times each week from police, fire and municipal officials in every part of the country. It explains in a few words, why Motorola is the predominant choice in the field of 2-way radio.

Motorola

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Rogers Majestic Electronic Ltd., Toronto, Canada